

TREATY ON INTERNATIONAL COOPERATION IN THE AREA OF PATENTS

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT ON PATENTABILITY

(Chapter II of the Treaty on International Cooperation in the Area of Patents)

Applicant's or Agent's File Ref. 42 290..be	FOR FURTHER ACTION		See Form PCT/IPEA/416
International Application No. PCT/EP2004/012780	International Filing Date (Month/Day/Year) November 11, 2004	Priority Date (Month/Day/Year) December 13, 2003	
International Patent Classification (IPC) or National Classification and IPC F16D7/02, F16D1/08, F16D3/06			
Applicant SMS DEMAG AKTIENGESELLSCHAFT et al.			

<p>1. This international preliminary examination report has been prepared by the duly commissioned International Preliminary Examining Authority according to Article 35 and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 pages, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES; these comprise</p> <p>a. <input type="checkbox"/> (sent to the applicant and the International Office) a total of pages; these are</p> <ul style="list-style-type: none"> <input type="checkbox"/> pages of the description, claims, and/or drawings which have been amended and are the basis for this report and/or pages containing rectifications that have been approved by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> pages which replace earlier pages but which, for the reasons given in field No. 1, item 4, and in the supplementary field, in the opinion of this Authority, contain a change that goes beyond the disclosed contents of the international application in the version originally submitted. <p>b. <input type="checkbox"/> (sent only to the International Office): (please specify the type and number of the electronic data carrier(s)), which contain a sequence listing and/or accompanying tables, only in computer-readable form, as specified in the supplementary field regarding the sequence listing (see Section 802 of the Administrative Instructions)</p> <p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Field No. I Basis of the report <input type="checkbox"/> Field No. II Priority <input type="checkbox"/> Field No. III Nonestablishment of opinion with respect to novelty, inventive activity, and commercial viability. <input type="checkbox"/> Field No. IV Lack of unity of the invention <input checked="" type="checkbox"/> Field No. V Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination <input type="checkbox"/> Field No. VI Certain documents cited <input type="checkbox"/> Field No. VII Certain defects in the international application <input type="checkbox"/> Field No. VIII Certain observations on the international application

Date of submission of the petition: February 10, 2005	Date of completion of this report: November 15, 2005
Name and mailing address of the office assigned to perform the preliminary examination: European Patent Office – P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk – Pays Bas Tel: +31 70 340 – 2040 Tx: 31 651 epo ni Fax: +31 70 340 – 3016	Authorized Officer: Van Overbeeke, J. Tel: +31 70 340-4093

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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT ON
PATENTABILITY**

AP3 Rec'd PCT/PTO 10 JUN 2008

International File No.: **PCT/EP2004/012780**

Field No. I Basis of the Report

1. With respect to the **language**, the report is based on the international application in the language in which it was submitted unless otherwise indicated under this item.
 - ☐ The report is based on a translation from the original language into the following language, which is the language of the translation, which was submitted for the following purpose:
 - ☐ international search (under Rules 12.3 and 23.1 b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rule 55.2 and/or Rule 55.3)
2. With regard to the **constituent parts*** of the international application, the report is based on *(replacement pages which were submitted to the application office in compliance with a request according to Article 14 are considered "originally filed" in the context of this report and are not attached to the report)*:

Specification, pages:

1-8 as originally filed

Claims, Nos.:

1-9 as originally filed

Drawings, Pages:

1/1 as originally filed

- ☐ a sequence listing and/or any accompanying tables – see supplementary field regarding the sequence listing.

3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description: pages
 - ☐ the claims: Nos.
 - ☐ the drawings: sheets/figures:
 - ☐ the sequence listing (*exact details*):
 - ☐ any tables accompanying the sequence listing (*exact details*):
4. ☐ This report has been prepared as if (some of) the amendments attached to this report and listed below had not been made, since for the reasons specified in the supplementary field they are

considered by this Authority to go beyond the disclosure as originally filed (Rule 70.2 c)).

☐ the description: pages

☐ the claims: Nos.

☐ the drawings: sheets/figures:

☐ the sequence listing (*exact details*):

☐ any tables accompanying the sequence listing (*exact details*):

* If Item 4 applies, some or all of these pages can be furnished with the comment "replaced."

Field No. V Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination

1. Determination

Novelty (N)	Yes:	Claims 1-9
	No:	Claims
Inventive Activity (AI):	Yes:	Claims 1-9
	No:	Claims
Commercial Viability (CV):	Yes:	Claims 1-9
	No:	Claims

2. Documents and Declarations (Rule 70.7):

See attached page.

**INTERNATIONAL PRELIMINARY
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International File No.: PCT/EP2004/012780

Re Item V

Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination.

1. With respect to Claim 1:

Claim 1 satisfies the requirements of Article 33(2) to 33(4) PCT with respect to novelty, inventive activity, and commercial viability.

Since none of the documents cited in the search report or acknowledged in the introduction to the specification specifies the features of independent Claim 1 in their totality, the object of Claim 1 is novel.

The documents cited in the search report do not suggest to one skilled in the art that an overload safety coupling, which bridges a toothed spindle section and a spindle section with a permanent seat in accordance with DE 43 26 868 C, could be designed with a rotating-and-sliding sleeve in accordance with the characterizing clause of Claim 1. The measure, wherein the rotating-and-sliding sleeve, which has internal toothing at one end to hold the toothed spindle section in a way that allows axial displacement, whereas, at the other end, it holds an inner sleeve permanently seated on the spindle section, and where a pressure sleeve and a pressure gap pretensioned with pressure fluid create a nonrotatable, frictional connection with the rear sleeve-like extension of the rotating-and-sliding sleeve, which connection gives way in the event of an overload, results from a step that does not constitute an obvious elaboration of the cited prior art. Therefore, the safety coupling according to Claim 1 is based on inventive activity.

The object of Claim 1 can be built and used and therefore must also be regarded as commercially viable.

2. With respect to Claims 2-9:

The dependent Claims 2-9 contain embodiments of a safety coupling according to Claim 1, which are advantageous and are not self-evident. Therefore, Claims 2-9 also meet the requirements of the PCT with respect to novelty, inventive activity, and commercial viability in accordance with Articles 33(2) to (4) PCT.